Woolman (G.S.)

PRICED

AND

Illustrated Catalogue

MICROSCOPES

AND

OPTICAL INSTRUMENTS.



FOR SALE BY

G. S. WOOLMAN,

116 FULTON STREET, NEW YORK.

NOTICE.

Having disposed of our New York business to Mr. GEORGE S. WOOLMAN, our former Manager, and for many years connected with our house in this city, we take this opportunity of returning thanks to our friends for their liberal patronage, and to ask for our successor a continuance of the same.

Respectfully,

JAMES W. QUEEN & CO.

PHILADELPHIA, Feb. 1st, 1876.

Having the best Selected Stock of Microscopes and Optical Instruments in the city, I respectfully ask its inspection by purchasers before going elsewhere.

TERMS CASH.

All instruments guaranteed as represented.

Where customers are unknown, satisfactory reference (New York preferred) should be given, unless order is accompanied with the money.

Remittances should be made by Bank Drafts or P. O. Money Order.

When money does not accompany order, goods will be sent per Express, C. O. D.; when this is desired a small remittance must be sent to insure the goods being taken up at destination.

Goods can only be sent by mail at letter postage at 6 cents per oz. The amount of postage must be included in the remittance.

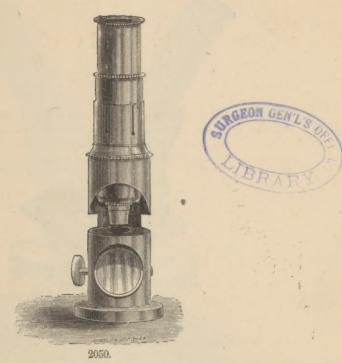
All packing boxes will be charged at cost, and goods will be packed with the utmost care, but no responsibility will be resumed by me for breakage or other, damage after a package leaves my premises, unless by special contract.

If not interested in this catalogue please hand it to any of your friends who are.

G. S. WOOLMAN.

NEW YORK, MAY, 1879.

BOYS' COMPOUND MICROSCOPE.



This instrument is a well-made and substantial one, and well adapted to the study of objects requiring rather more power than can be conveniently obtained with a simple microscope. It will show satisfactorily the larger animalculæ in pond-water, the scales from a butterfly's wing, and similar minute objects. The stand is of polished brass, handsomely lacquered, with one Eyepiece and one Object-glass, magnifying when combined about 40 diameters, or 1600 times. One prepared object, two glass slips, and a pair of brass forceps are furnished with it, and the whole is packed in a neat, polished walnut wood case.

The magnifying power, as understood by microscopists, is in diameters. A popular way is to give the area or superficies; and, as the object is magnified equally in all directions, this power is obtained by squaring the diameter.

The Rev. Mr. Wood's little work, entitled Common Objects of the Microscope, (No. — of this Catalogue), is highly recommended for the use of beginners in the study. It contains full directions in the use of the instrument, and for the collection and preservation of specimens; is illustrated with 400 engravings, printed in colors, and costs the trifling sum of 50 cents.

We have a great variety of popular objects, well prepared, and mounted on papered glass slides (No. —— of this Catalogue), which are specially suited to the capacity of this and other cheap Microscopes. They cost \$1.50 per dozen, or 20 cents each. Also, some cheaper ones of French make, at \$1.25 per dozen.

QUEEN'S UNIVERSAL HOUSEHOLD MICROSCOPE.



2051-52.

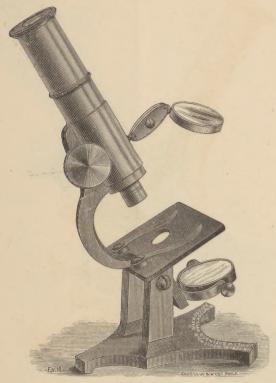
No. Price. 2050 Queen's Universal Household Microscope..... ... \$5 00

This admirable instrument is the most complete, convenient and powerful Microscope ever produced for so low a cost. It has all the important parts of a firstclass instrument, is readily adjusted for the examination of all classes of objects, and is well calculated not only to amuse but instruct young persons, and thereby foster a taste for the study of Natural History.

The Stand is ten inches in height, with hinged joint, allowing it to be inclined to any angle for convenience of observation. The base is of cast-iron, handsomely bronzed, the compound body of finely lacquered brass, with draw-tube for increasing the power of the object-glasses. These are two in number, and give, in connection with the draw-tube, a range of powers from 20 to 100 diameters, or from 400 to 10,000 times. The stage is of ample size, and is provided with spring clips for holding the object whilst under observation; beneath is a concave mirror, conveniently jointed, for the illumination of all transparent objects. All the ordinary animalculæ found in pond-water can be satisfactorily shown with this Microscope. One prepared object, two glass slips, and a pair of brass forceps, are furnished with it, and the whole is packed in a neat and strong walnut-wood case.

2051 Queen's Universal Household Microscope, the same as 2050, with the addition of an Achromatic object-glass of three powers (from 40 to 200 diameters), will exhibit satisfactorily blood and pus corpuscles.....

QUEEN'S UNIVERSAL HOUSEHOLD MICROSCOPE.



2051-54.

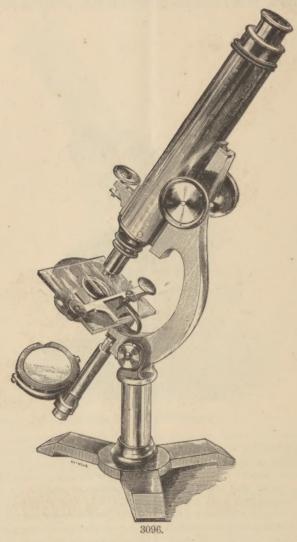
No.

2053 Queen's Universal Household Microscope, similar to 2051, with additions of Rack and Pinion for adjustment of focus, and a condensing Lens for the illumination of opaque objects. These additions render this instrument as near perfect as possible, for so small a cost, and leave but little to be desired. One prepared object, two glass slips, and a pair of brass forceps, accompany each one, and the whole is contained in a neat, polished mahogany case, \$8 00

2054 Queen's Universal Household Microscope, same as 2053, with addition of an Achromatic triplet object-glass, giving powers from 40

We believe these Microscopes (from 2051 to 2054) cover the entire field possible for such cheap instruments, and that in all essentials they are far in advance of anything heretofore offered the public. In the ten years that have elapsed since we first introduced No. 2051, we have sold several thousands of the same, and always with satisfaction to the purchasers.

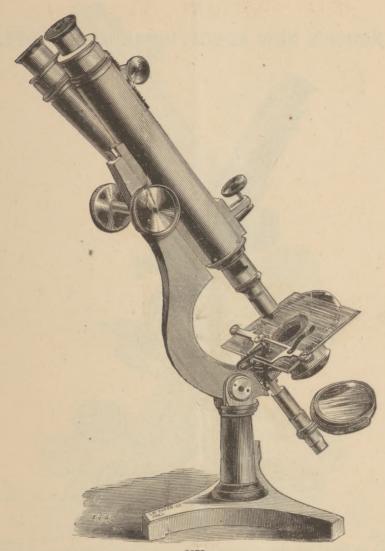
QUEEN'S STUDENTS' MICROSCOPE.



Price.

No. 2070 Queen's Students' Microscope, Monocular, 14 inches high, of highly finished brass; Stage of glass, with perfectly smooth motions in all directions plane and concave Mirrors; revolving Diaphragm, which may be entirely removed when extremely oblique illumination is required; Draw-Tube; Rack and Pinion and Fine Screw Adjustments for focus; with Two Eyepieces, Nos. 1 and 2; Two-third inch Objective, 30 degrees angle of aperture; one-fifth inch Objective, 100 degrees angle of aperture, adjustable; Condensing Lens; Upright Walnut Case, with brass handle and lock and key .\$85 00

2071 Queen's Students' Microscope Monocular, same as above, but with Glass Rotating Stage...... 90 00

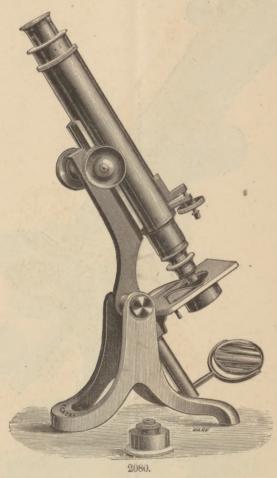


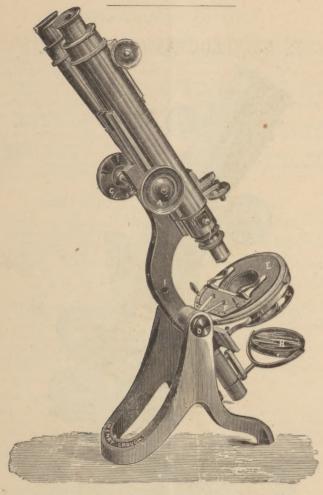
2072.

No.

2072 Queen's Students' Microscope Binocular, 14 inches high, of brass throughout, handsomely finished; Glass Stage; Plane and Concave Mirrors; Removable Diaphragm, of three apertures; Rack and Pinion Adjustment to Draw-Tubes for distance between eyes; Rack and Pinion and Fine Lever Adjustments for focus; with two pair of Eyepieces, Nos. 1 and 2; two-third inch Objective, 30 degrees angle of aperture, adjustable one-fifth inch Objective, 100 degrees angle of aperture; Condensing Lens; Upright Walnut Case, with brass handle and lock and key \$110.00

CROUCH'S NEW EDUCATIONAL MICROSCOPE.





No.	Price.
2082	Crouch's Students' Microscope, Binocular, with Object Glasses, one inch and quarter inch Focus, two pairs Eyepieces (Nos. 1 and 2), Bull's Eye Condensing Lens, on separate stand, in Upright Polished Mahogany Case, with lock, key and brass handle; powers from 50 to 350 diameters\$100 00
2083	Crouch's Students' Microscope, Monocular, with two Eyepieces, Object Glasses, one inch and quarter inch Focus, Bull's Eye Con- densing Lens, on separate stand, Draw-tube, in Upright Mahogany Case, with lock, key and handle; powers from 50 to 500 diameters 80 00
2083	Crouch's Intermediate Microscope, Binocular, with two pairs Eyepieces, Nos. 1 and 2, in portable Mahogany case, with lock, key and handle
Any	Crouch's Intermediate Microscope, Binocular, same as 2083, with accessories Eyepieces two pairs (Nos. 1 and 2), o e and a half inch, two-third inch, one-fifth inch Object Glasses, Animalculæ Cage, Condensing Lens on separate stand, Stage Forceps and Brass Pliers, packed in Upright Mahogany Case with lock, key and handle 200 00 other desired grouping of stand and accessories will be made to meet the of purchasers, and estimates of combined price will be furnished for such lists.
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R. & J. BECK'S MICROSCOPES.



2175.

2175 Binocular National Microscope......\$100 00

Price.

Stand fourteen inches in height, all brass, inclines to any angle, rack and pinion, coarse adjustment, Micrometer movement on nosepiece fine adjustment, Glass Concentric Stage, with tube attached for carrying substage illumination, concave and plain mirror on swinging bar, Object Glasses 1 inch and 1 inch, magnifying from about 55 to 450 diameters, two pairs Eyepieces, stage forceps, glass plate, and pair forceps, in Mahogany Case.

FIRST-CLASS MICROSCOPE STANDS.						
No.	Pri	CE.				
2136 New Large Best Binocular Microscope Stand, with Concentric Rotating Stage and Iris Diaphragm, Rotating and Centering Sub-Stage, most complete movements to the Body, Stage, and Double Mirror. Two pairs of Evenieees, Pliers, Forcets, &c. manufed on two pillurs.		(1)				
pairs of Eyepieces, Pliers, Forceps, &c., mounted on two pillars 2137 New Large Best Monocular Microscope Stand, with Concentric Rotating Stage and Iris Diaphragm, Rotating and Centering Sub-Stage, most complete movements to the Body, Stage, and Double Mirror.						
Two Eyepieces, Pillars, Forceps, &c., mounted on two pillars 2144 New smaller Binocular Microscope Stand, on the same principle, and with the same actions as No. 2136. Two pairs of Eyepieces, Pliers.		00				
with the same actions as No. 2136. Two pairs of Eyepieces, Pliers, Forceps, &c, but with single pillar 2145 New smaller Monocular Microscope Stand, on the same principle, and with the same action, as No. 2137. Two Eyepieces, Pliers, Forceps,	165	00				
&c., but with single pillar	125	6 00				
CASES FOR FIRST-CLASS MICROSCOPES.						
2146 Best Upright Case, in Spanish Mahogany, for Nos. 2136 and 2137, with best brass handle, two boxes for Apparatus	35	00:				
best brass handle, two boxes for Apparatus	30	00				
2148 Upright Case, in Honduras Mahogany, for Nos. 2136 and 2137, with best		00				
brass handle, two boxes for Apparatus		00				
2150 Strong Flat Case, in Spanish Mahogany, with covered Dovetails (19 in long by 9 inches wide, and 4 inches deep), for Nos. 2136 and 2137.		50				
2154 Best Upright Case, in Spanish Mahogany, for Nos. 2144 and 2145, with best brass handle and box for Apparatus		50				
2155 Upright Case, in Honduras Mahogany, for Nos. 2144 and 2145, with best brass handle and box for Apparatus						
2156 Strong Flat Case, in Spanish Mahogany, with covered Dovetails, for Nos. 2144 and 2145, with best brass handle		00				
2175 Binocular National Microscope	. 100	00				
Stand fourteen inches in height, all brass, inclines to any angle, rack and pinion coarse adjustment, Micometer movement on nosepiece fine adjustment, Glass Concentric Stage, with tube attached for carrying substage illumination, concave and plain mirror on swinging bar, Object Glasses 1 inch and \(\frac{1}{2}\) inch, magnifying from about 55 to 450 diameters, two pairs Eyepieces, stage forceps, glass plate, and pair forceps in Mahogany Case.						
2176 Monocular National Microscop? Two Eyepieces and same Object Glasses and fittings as 2175.	80	00				
2177 National Binocular Stand only	65	00				
2178 National Monocular Stand only	40	00				
ACCESSORY APPARATUS,						
2179. Lieberkuhn to one inch Object Glass		00 75				
 2181. Achromatic Condenser and fitting 2182. Wenham's Parabolic Reflector for dark field illumination 2183. Polarizing Apparatus, complete with prisms. Plate of Selenite and 	8	00				
Adapter 2184 Wollaston's Camera Lucida for Drawing an object	6 2	00 00 00				
2186. Small Live Box 2187. Glass Trough, complete with wedge and spring. 2188. All the above Apparatus from Nos. 2179 to 2187, if ordered at once.		50 50 00				



No. 2190.

Stand same as 2189, with addition of rack adjustment, has concave and plain mirror, two eyepieces, one inch and quarter inch Objectives, substage for holding accessory apparatus, also removeable so as to allow greatest obliquity of light. Condensing Lens, stage forceps, &c., all packed in neat Mahogany box. Giving powers of 45, 60, 75, 110, 155, 210, 240, 350 diameters.

OBJECT GLASSES.

CHAS. A. SPENCER & SONS' OBJECTIVES.

STUDENTS' SERIES.

								Price.
3 incl	h. 8	degrees	angle of	apertur	e	 	 	\$6 00
2 do	. 10	do.	do.	do.		 	 	6 00
1 do	. 22	do.	do.	do.		 	 	10 00
2-3 do	. 32	do.	do.	do.		 	 	12 00
1-2 do	. 50	do.	do.	do.		 	 	15 00
1-4 do	. 100	do.	do.					
1-8 do	. 120	do.	do.	do.	*	 	 	24 00

PROFESSIONAL SERIES.

These from the 1-4 up are furnished with collar adjustment for correction for thin covers, and are excellent in workmanship and performance.

3	inch.	13	degrees	angle of	aperture	\$	18 00
2	do.			do.			
1	do.	33	do.	do.	do.	***************************************	18 00
2-3	do.	36	do.	do.	do.	***************************************	20 00
1-2	do.	65	do.	do.	do.		25 00
1-4	do.	115	do.	do.	do.	adjustable	24 00
1-6	do.	175	do.	do:	do.	dry and immersion	36 00
1-8	do.	175	do.	do.	do.	do do	40 00

FIRST QUALITY SERIES.

These lenses are of the widest angle of aperture, from the ½ inch up are provided with screw collar adjustment for thin cover. They were awarded the gold medal at the late Paris Exhibition, being superior to all competitors.

3	inch focus	13	degrees	angle	of anerture			810	00:
2	_	20		do.	do.				
2	do.	20	do.	uo.	uo.		********	25	00
1	do.	50	do.	do.	do.	************		45	00
2-3	do.	47	do.	do.	do.			32	00
1-2	do.	100	do.	do.	do.	adjustable		50	00
1-4	do. 4 system	180	do.	do.	do.	dry and immersion	n	65	00
1-6	inch focus	180	do.	do.	do.	do.		70	00
1-8	do.	180	do.	do.	do.	do.	*******	70	00
1-10	do.	180	do.	do.	do.	do.		80	00
1-16	do.	180	do.	do.	do.	do.		115	00.
1-25	do.	180	do.	do.	do.	do.		150	00
1-50	do.	175	do.	do.	do.	immersion		200	00
1-75	do.	175	do.	do.	do.	Jane 1		250	00

		CROUCH	S OBJEC	T GLASS	SES.	
3 inch fe	ocus 10 des	grees angle	of aperture			. \$7 25
2 do.	12	lo. do.	do.		*********	7 25
1 do.		lo. do.	do.			
1-4 do.		lo. do.	do.			
1-5 do.		lo. do.	do.			23 75
1-6 do. 1-10 do.		lo. do.	do.			
1-15 do.		lo. do.	do.			
	R			ECT GLAS		
4 inch						13 00
3 do.	12 do.	do. do			*** *********	27 50
		do. do			*************	
		do. do				1
	55 do.	do. do				40 00
		do. do				10 00
		do. do				~~ ~~
1-8 do. 1	20 do.	do. do			****** *********	
1-1 0 do. 1	60 do.	do. do	. imme	rsion		50 00
		BECK'S	NATION.	AL SERIE	S	
					orking Lenses.	
						\$6 00
2-3 do						10 00
						12 00 20 00
					r makers, notably,	
Zeiss, Gund	llach, Wales	, Hartnach	&c., &c.	Microscopi	ists are always v	velcome
					every facility for so	
where.	will find it	to their a	ivantage to	examine in	y stock before going	ig eise-
MATER	CIALS FO	R PREP	ARING A	IND MOU	INTING OBJE	CTS.
No.	C11 0 1	1 0 11 -		1 1		Price.
					lges, per dozen, 18	\$1 75
2301. Glass	Slips, 3x1 in	nch, flatted	crown, gro	und edges,	per dozen, 30 cts;	
pe	r gross .					3 00
					lges, per dozen, 45	4 50
2303. Glass	Slips, 3x1 in	nch, best p	atent plate	extra thin	n, ground and pol-	
isl	ned edges, p	er dozen, 45	cents; pe	r gross		4 75
2304. Glass	Slips, 28x4	inch, best il	atted crown	n, unground	l edges, per dozen,	1 75
2305. Glass	Slips, 23x3	inch. best	flatted cro	wn. ground	edges, per dozen,	T 10
30	cents; per	gross				3 00
2306. Glass	Slips, 23x	inch, wit	h concave	centres, fo	or examination of	1 50
2307. Glass	uids, per de Slips, 3x1 ir	ich, with co	ncave centi	es for exam	nination of liquids,	1 90
pe	r dozen					1 50
2308. Glass	Slips, 3x1 ir	nch, with co	ncave_cent:	res, oval or :	round, and revolv-	
2309 Glass	Slips 3v1 in	covers, each	edges wi	th cells of	different sizes and	75
					ameren sizes and	2 25
2310. Glass	Rings, for n	naking cells	as above,	per dozen		1 00
2311. Block 2312. Eboni		do. do.	do do.	9		50 15
MOIL. EDUII	uo.	uo.	uo.	uo.		10

	Price
2313. Thin Glass, in sheets; No. 1, per oz., \$1 50; No. 2, per oz., \$1 00;	
No. 3, per oz. 2314. Thin Glass Squares; No. 3, 1-50 to 1-70 of an inch thick, from ½ to 1	75
2514. Thin Glass Squares; No. 3, 1-50 to 1-70 of an inch thick, from \(\frac{1}{2} \) to 1	1 25
inch square, per dozen, 18 cents; per oz. 2315. Thin Glass Squares; No. 2, 1-70 to 1-100 of an inch thick, from ½ to 1	1 20
inch square ner dozen 20 cents, ner oz	2 25
inch square, per dozen, 20 cents; per oz	2 20
inch square, per dozen, 25 cents : per oz.	2 75
inch square, per dozen, 25 cents; per oz	
inch diameter, per dozen, 20 cents; per oz	2 25
inch diameter, per dozen, 25 cents, per oz.	2 75
2319. Thin Glass Circles; No. 1, 1-100 to 1-150 of an inch thick, and \(\frac{1}{4}\) to 1	0 ==
inch diameter, per dozen, 30 cents; per oz	3 75
2320. Thin Glass Circles; 1-200, or thinner, per ounce	5 00 25
2322. Do. do. prepared for use without heat, per bottle	50
2323. Damar, the new mounting medium, per bottle	50
2324. Pure Glycerin, per bottle	25
2325. Do. Jelly, per bottle	50
2326. Hæmatoxylon Staining Fluid, per bottle	25
2327. Neutral Carmine Solution, per bottle 2328. Brunswick Black, per bottle	50
2328. Brunswick Black, per bottle	20
2329. Asphalte, do. 2330. Gold Size, do. 2331. Marine Glue, do. 2332. Oil of Cloves do.	25
2330. Gold Size, do	25 35
9339 Oil of Cloves do	50
	50
2334. White Zinc Cement, the best for fluid mounting	50
2334. White Zinc Cement, the best for fluid mounting 2335. Watch Glasses, all sizes, per dozen	70
2000. Dipping Tubes, each.	10
2337. Dropping Tubes, with rubber bulb, each	10
ACCESSORY APPARATUS.	
Achromatic Condensers from\$10 to	40 00
Polariscopes, from	40 00
Condensing Lens, on Stand	6 00
Condensing Lens, Bull's-Eye, on Stand	8 00
Eyepieces for Economics	4 00
Eyepieces for larger stands. Holman's Life and Current Slides, each,	6 00
Double Nose-piece	5 00
Double Nose-pieces, bent	6 00
Turn Table, (Cox's Self-centering)	6 00
A full line of Micrometers, from	15 00

A large assortment of objects covering all branches of Natural History. The assortment is constantly changing, so that no list does them justice, an examination will repay any collector. Parties at a distance, upon proper New York or Philadelphia reference, can have a selection sent them, upon approval, to be returned in two weeks, they paying express charges.

Subsequent editions of my Microscopical Catalogue will have the numerous Accessory Apparatus and mounting materials, &c., &c., used by microscopists fully priced and illustrated. All noveltics and improvements will be kept by me as fast as they are produced. Correspondence is solicited, and commissions will be promptly attended to.

"Acme" Microscope.

THE LATEST

The cut represents its general appearance. The quick movement is by a very excellent, smooth rack; the fine adjustment is a micrometer-screw allowing absolutely no side movement, and acting upon the entire body. Horseshocbase is clamped, so that it can be reversed, if wanted to give increased steadiness when the stand is used in a horizontal position. The mirror-bar, carrying the centering sub-stage, swings above the stage. Circle, on which the mirror-bar swings divided to 5° for measuring angle of light.

IMPROVED
INSTRUMENT.

Extra thin stage, with movable clips, so that an object can be placed beneath it for extreme oblique light; extra rotating stage.



Price for Microscope, with or Rotating stage		 1.50
If ordered complete Solid Eye-pieces, ½. ¼, or	inch	 \$45.00

FOR SALE DY

G. S. WOOLMAN,

116 FULTON ST., NEW YORK,

General Dealer in all Apparatus pertaining to the Microscope—Glass Slips, Thin Glass, Mounting Materials, Objects of all kinds, Drawing Instruments and Materials, etc., etc.